# DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

	A22CE
	Revision 53
	CESSNA
500	550
S550	552
560	560XL
Jı	ine 26, 2000

### TYPE CERTIFICATE DATA SHEET NO. A22CE

This data sheet which is part of Type Certificate No. A22CE prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder Cessna Aircraft Company

P. O. Box 7704

Wichita, Kansas 67277

#### I - Model 500, Citation and Citation I, (Transport Category), Approved September 9, 1971

The Model 500 Citation and Citation I are defined by Cessna Airplane Assembly Drawing Number 5500000.

Engines Two Pratt and Whitney Aircraft of Canada, Ltd. (formerly United Aircraft of Canada,

Ltd.) JT15D-1 turbofans, or Pratt and Whitney Aircraft JT15D-1 turbofans. Engines may be interchanged in any combination. (S/N 500-0001 through 500-0349) (See

NOTES 9 and 11)

Two Pratt and Whitney Aircraft of Canada, Ltd. JT15D-1A turbofans. (S/N 500-0350 through 500-0664 except 500-0417 and 500-0654)

Two Pratt and Whitney Aircraft of Canada, Ltd. JT15D-1B turbofans.

(S/N 500-0417, 500-0654, and 500-0665 through 500-0689)

Fuel Jet A, Jet A-1, Jet B, JP-4, JP-5 or JP-8. For required use of anti-icing additives and

emergency use of aviation gasoline, refer to the FAA Approved Airplane Flight Manual.

Engine Limits Static thrust, standard day, sea level:

Takeoff (5 min.) 2200 lb.

Max. continuous 2090 lb.

Max. permissible engine rotor operational speeds:

 $N_1$  (Fan) JT15D-1 99 percent 15,840 r.p.m.  $N_1$  (Fan) JT15D-1A 102.1 percent 16,336 r.p.m.  $N_1$  (Fan) JT15D-1B 103.4 percent 16,540 r.p.m.  $N_2$  (Gas gen.) 95 percent 31,120 r.p.m.

Max. permissible interturbine gas temperatures:

Takeoff 700° C.

Max. continuous 680° C.

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Starting Transient (2 seconds) 500° C.

 $720^{\circ}$  C.

#### I - Model 500, Citation and Citation I, (Transport Category), Approved September 9, 1971 (Cont'd)

Airspeed Limits (CAS) V<sub>MO</sub> (Maximum Operating)

Sea level to 14,000 ft. 260 knots

14,000 ft. to 26,000 ft.

(S/N 500-0001 through 500-0349) 287 knots\*

14,000 ft. to 28,000 ft.

(S/N 500-0350 through 500-0689) 275 knots\*

M<sub>MO</sub> Above 26,000 ft.

(S/N 500-0001 through 500-0349) 0.70 Mach

Above 28,000 ft.

(S/N 500-0350 through 500-0689) 0.70 Mach

V<sub>A</sub> (Sea level)

10,850 lb. 178 knots

(S/N 500-0001 through 500-0070)

11,500 lb.

(S/N 500-0071 through 500-0302) 182 knots

11,850 lb.

(S/N 500-0303 through 500-0349) 185 knots (S/N 500-0350 through 500-0689) 182 knots

See AFM for variations with weight and altitude and optional configurations.

 $V_B$  (Speed for maximum gust intensity) 210 knots

V<sub>FE</sub> (Flaps extended)

## C.G. Range (Landing Gear Extended) S/N 500-0001 through 500-0070. See NOTE 5

Forward Limits: Linear variation from 249.2 in. aft of datum (21.5% MAC) at 10,850 lb. to 246.4 in. aft of

datum (18.0% MAC) at 7,500 lb.; 246.4 in. aft of datum (18.0% MAC) at 7,500 lb. or

less.

Aft Limits: 255.9 in. aft of datum (30.0 % MAC) at 10,850 lb. or less.

#### C.G. Range (Landing Gear Extended) S/N 500-0071 through 500-0302. See NOTE 5

Forward Limits: Linear variation from 249.7 in aft of datum (22.6% MAC) at 11,500 lb. to 246.4 in aft of

datum (18.0% MAC) at 7,500 lb.; 246.4 in aft of datum (18.0% MAC) at 7,500 lb. or

less.

Aft Limits: 255.9 in. aft of datum (30.0% MAC) at 11,500 lb. or less.

C.G. Range (Landing Gear Extended) S/N 500-0303 through 500-0689

<sup>\*</sup>See NOTE 7 for restricted V<sub>MO</sub> for optional fuel weight configuration.

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Forward Limits: Linear variation from 250.0 in. aft of datum (22.6% MAC) at 11,850 lb. to 246.4 in aft of

datum (18.0% MAC) at 7,500 lb.;  $\,$  246.4 in. aft of datum (18.0% MAC) at 7,500 lb. or

less.

Aft Limits: 255.9 in. aft of datum (30.0% MAC) at 11,850 lb. or less.

## I - Model 500, Citation and Citation I, (Transport Category), Approved September 9, 1971 (Cont'd)

Datum 94.0 in. forward of the front face of the forward pressure bulkhead.

MAC 79.61 in. (L.E. of MAC at Sta. +232.04)

Note this is reference MAC for basic wing without tip.

Leveling Means Seat Rails

Maximum Weight		S/N 500-0001	S/N 500-0071	S/N 500-0303
		Through 500-0070	Through 500-0302	Through 500-0689
		(See NOTE 5)	(See NOTE 5)	
	Takeoff	10,850 lb.	11,500 lb.	11,850 lb.
	Landing	10,400 lb.	11,000 lb.	11,350 lb.
	Zero fuel*	8,400 lb.	8,400 lb.	8,400 lb.
	Ramp	11,000 lb.	11,650 lb.	12,000 lb.

<sup>\*</sup>See NOTE 7 for optional zero fuel weights.

Minimum Crew For all flights: 2 persons (pilot and co-pilot)

No. of Seats 7 to 9 (2 pilots, 5 to 7 passengers)

See NOTE 8

Maximum Baggage Nose compartment 350 lb. (at Sta. + 74.0)

Aft cabin 650 lb. (at Sta. +286.3)

Fuel Capacity (Gal.) Two wing tanks: Total 276 each; usable 268 each (S/N 500-0001 through 0040)

Total 277 each; usable 272 each (S/N 500-0041 through 0213) Total 287 each; usable 282 each (S/N 500-0214 through 500-0689)

Down  $0^{\circ}$  to  $40^{\circ} \pm 1^{\circ}$ 

ARM = +256.0 in.

See NOTE 1 for data on unusable fuel

Oil Capacity (Quarts) Two engine mounted tanks:

JT15D-1 Engine Total 8.9 each; usable 5.0 each JT15D-1A Engine Total 8.6 each; usable 5.0 each

ARM - +322.0 in.

Maximum Operating 35,000 ft. (S/N 500-0001 through 0213) (See NOTE 10)

Altitude 41,000 ft. (S/N 500-0214 through 500-0689)

Wing flap

Control Surface	Elevator	Up 20°	<u>+</u> 1°	Down $15^{\circ}$ $\pm 1^{\circ}$			
Movements	Elevator trim tab	Up 7°	+1°, -0°	Down $18^{\circ}$ $+1^{\circ}$ , $-0^{\circ}$			
				(S/N 500-0001 through 500-0129)			
		Up 10°	+1°, -0°	Down $19^{\circ}$ $+1^{\circ}$ , $-0^{\circ}$			
			(S/N 500-0	0130 through 500-0689)			
	Rudder	Right 22°	<u>+</u> 1°	Left $22^{\circ}$ $\pm 1^{\circ}$			
	(perpendicular to hinge)						
	Rudder trim tab	Right 10°	<u>+</u> 1°				
	(perpendicular to hinge)						
	Aileron	Up 21°	<u>+</u> 1°	Down $16^{\circ}$ $\pm 1^{\circ}$			
	Aileron trim tab	Up 20°	<u>+</u> 1°	Down $20^{\circ}$ $\pm 1^{\circ}$			

Speed brake - Upper Up  $0^{\circ}$  to  $58^{\circ} \pm 2^{\circ}$ 

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See Airplane Maintenance Manual for rigging instructions

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#### I - Model 500, Citation and Citation I, (Transport Category), Approved September 9, 1971 (Cont'd)

#### Certification Basis

- (1) Part 25 of the Federal Aviation Regulations effective February 1, 1965, as amended by Amendments 25-1 through 25-17;
  - (a) Additions:

FAR §§ 25.934 and 25.1091(d)(2) as amended by Amendments 25-1 through 25-23; § 25.1387 as amended by Amendments 25-1 through 25-30; §§ 25.1385 and 25.1303(a)(2) as amended by Amendments 25-1 through 25-38:

- (2) FAR Part 36 effective December 1, 1969.
- (3) Special Conditions as follows:
  - (a) 25-25-CE-4, additional requirements for systems, airframe, flight and propulsion. See note 28.
- (4) Equivalent levels of safety as follows:
  - (a) FAR § 25.807(d), Emergency exits ditching;
  - (b) FAR § 25.1199(b) and (c), Fire Bottle Pressure Relief Valve;
  - (c) FAR § 25.1439(b)(2)(ii), Protective Eye Equipment;
  - (d) FAR § 25.815, Passenger Cabin Aisle Width;
  - (e) FAR § 25.1305(r), Use of  $N_1$  for Power Presentation;
  - (f) FAR § 25.773(b)(2), Use of clear vision area of windshield; and
  - (g) FAR § 25.1331(a)(1), Location of pressure gage to indicate adequate power to bank and pitch indicator.
- (5) Exemption: Exemption number 1435 granted. Model 500 exempt from requirements of FAR § 25.1378(a) for location of position light on vertical tail. This exemption was deleted from certification basis by addition of FAR § 25.1387 as amended by Amendments 25-1 through 25-30.
- (6) FAR § 25.801 ditching not complied with.
- (7) Compliance with ice protection has been demonstrated in accordance with FAR § 25.1419.

Serial Nos. Eligible: 500-0001 through 500-0689 (See NOTE 18)

## II - Model 550, Citation II, (Transport Category), Approved March 24, 1978

The Model 550 Citation II is defined by Cessna Airplane Assembly Drawing Number 6500000.

Engines Two Pratt and Whitney Aircraft of Canada, Ltd. (formerly United Aircraft of Canada,

Ltd.) JT15D-4 turbofans or Pratt and Whitney Aircraft JT15D-4 turbofans.

Fuel Jet A, Jet A-1, Jet B, JP-4, JP-5 or JP-8. For required use of anti-icing additives and emergency use of aviation gasoline, refer to the FAA Approved Airplane Flight Manual.

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#### II - Model 550, Citation II, (Transport Category), Approved March 24, 1978 (Cont'd)

Engine Limits	Static thrust, standard day, sea lev	el:

Takeoff (5 min.) 2500 lb.

Max. continuous 2375 lb.

Max. permissible engine rotor operating speeds:

 $N_1$  (Fan) JT15D-4 104 percent 16,540 r.p.m.  $N_2$  (Gas Gen.) 96 percent 31,450 r.p.m.

Max. permissible interturbine gas temperatures:

Takeoff $700^{\circ}$  C.Max. continuous $680^{\circ}$  C.Starting $500^{\circ}$  C.Transient (2 seconds) $720^{\circ}$  C.

Airspeed Limits (CAS) V<sub>MO</sub> (Maximum operating)

 Sea level to 14,000 ft.
 260 knots

 14,000 ft. to 28,000 ft.
 275 knots

 Sea level to 30,500 ft.
 260 knots

 M<sub>MO</sub> Above 30,500 ft.
 0.70 Mach

(S/N 550-0550 through 550-0800)

 $V_A$  (Sea level)

13,300 ft. 186 knots

See AFM for variations with weight and altitude and optional configurations.

 $V_B$  (Speed for max. gust intensity) 210 knots

V<sub>E</sub> (Flaps extended)

 $\begin{array}{ccc} 40^{\circ} \, (Landing) & 174 \, knots \\ 15^{\circ} \, (Takeoff \, and \, approach) & 200 \, knots \\ V_{MCA} \, (Minimum \, control \, speed) \, Air & 75 \, knots \\ V_{MCG} \, (Minimum \, control \, speed) \, Ground & 62 \, knots \\ V_{LO} \, (Landing \, gear \, operating) & 174 \, knots \\ \end{array}$ 

(S/N 550-0001 through 550-0626)

 $V_{LO}$  (Landing gear operating extend) 248 knots

(S/N 550-0627 through 550-0800)

 $V_{LO}$  (Landing gear operating retract) 198 knots

(S/N 550-0627 through 550-0800)

 $V_{LE}$  (Landing gear extended) 174 knots

(S/N 550-0001 through 550-0626)

 $V_{LE}$  (Landing gear extended) 260 knots

(S/N 550-0627 through 550-0800)

 $V_{SB}$  (Speed brakes extended Any speed with or without flaps

\*See NOTE 7 for restricted  $V_{MO}$  for optional fuel weight configuration,

S/N 550-0001 through 550-0549.

See NOTE 21 for increased  $V_{LO}$  and  $V_{LE}$  for S/N 550-0001 through 550- 0626.

## C.G. Range (Landing Gear Extended) S/N 550-0001 through 550-0626

Forward Limits: Linear variation from 279.8 in. aft of datum (21.6% MAC) at 13,300 lb. to 276.1 in. aft of datum (18.0% MAC) at 8,540 lb.; 276.1 in. aft of datum (18.0% MAC) at 8,540 lb. or less.

Aft Limits:

285.8 in. aft of datum (30.0 % MAC) at 13,300 lb. or less.

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# II - Model 550, Citation II, (Transport Category), Approved March 24, 1978 (Cont'd)

C.G. Range (Landing Gear Extended) S/N 550-0627 through 550-0800

Forward Limits: Linear variation from 280.4 in. aft of datum (23.3% MAC) at 14.100 lb. to 276.1 in. aft of

datum (18.0% MAC) at 8,540 lb.; 276.1 in. aft of datum (18.0% MAC) at 8,540 lb. or

less.

Aft Limits: 285.8 in. aft of datum (30.0 % MAC) at 14,100 lb. or less.

Empty Wt. C.G. Range None

Datum 94.0 in. forward of the front face of the forward pressure bulkhead.

MAC 80.98 in. (L.E. of MAC at Sta. +261.56)

Note: This is reference MAC for basic wing without tip.

Leveling Means Seat Rails

Maximum Weight S/N 550-0001 S/N 550-0627

 Through 550-0626
 Through 550-0800

 Takeoff
 13,300 lb.
 14,100 lb.

 Landing
 12,700 lb.
 13,500 lb.

 Zero fuel\*
 9,500 lb.
 11,000 lb.

 Ramp
 13,500 lb.
 14,300 lb.

\*See NOTE 7 for optional zero fuel weight (S/N 550-0001 through 550-0549)

Minimum Crew For all flights: 2 persons (pilot and co-pilot)

No. of Seats 8 to 13 (2 pilots, 6 to 11 passengers)

See NOTE 12

Maximum Baggage Nose compartment 350 lb. at Sta. + 74.0

Aft cabin 400 lb. at Sta. + 321.0

200 lb. at Sta. + 338.0

Tailcone 200 lb. at Sta. + 442.0(S/N 550-0001 through 550-0626)

200 lb. at Sta. + 431.0 and

300 lb. at Sta. + 462.0(S/N 550-0627 through 550-0800)

Fuel Capacity (Gal.) Two wing tanks: Total 376 each; usable 371 each

ARM = +285.9 in.

See NOTE 1 for data on unusable fuel

Oil Capacity (Quarts) Two engine mounted tanks: Total 9.0 each; usable 5.7 each

ARM = +367.0 in.

Maximum Operating

Altitude

43,000 ft.

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#### II - Model 550, Citation II, (Transport Category), Approved March 24, 1978 (Cont'd)

Control Surface Elevator Up  $17^{\circ} \pm 1^{\circ}$ ,  $-0^{\circ}$ Down 15° ±1° Movements Elevator trim tab - S/N 550-0001 through S/N 550-0576 Up  $15^{\circ} + 1^{\circ}, -0^{\circ}$ Down  $17^{\circ} + 1^{\circ}, -0^{\circ}$ Elevator trim tab - S/N 550-0577 through 550-0800 Up  $17^{\circ} + 1^{\circ}, -0^{\circ}$ Down  $15^{\circ} + 1^{\circ}$ ,  $-0^{\circ}$ Rudder 22° <u>+</u>1°  $22^{\circ} + 1^{\circ}$ Right Left (perpendicular to hinge)  $10^{\circ} + 1^{\circ}$ Rudder trim tab Right 10° ±1° Left (perpendicular to hinge) Aileron  $19^{\circ} + 1^{\circ}$ Down  $15^{\circ} + 1^{\circ}$ Up 20° <u>+</u>1° Aileron trim tab Up Down  $20^{\circ} + 1^{\circ}$ Wing flap Down  $0^{\circ}$  to  $40^{\circ}$  +1° Up  $0^{\circ}$  to  $58^{\circ} \pm 2^{\circ}$ Speed brake - Upper See Airplane Maintenance Manual for rigging instructions

Certification Basis - S/N 550-001 through 550-0505 and 550-0550 through 550-0800

- (1) Part 25 of the Federal Aviation Regulations effective February 1, 1965, as amended by Amendments 25-1 through 25-17;
  - (a) Additions:

FAR §§ 25.934 and 25.1091(d)(2) as amended by Amendments 25-1 through 25-23; § 25.1401 as amended by Amendments 25-1 through 25-27; § 25.1387 as amended by Amendments 25-1 through 25-30; and §§ 25.1303(a)(2) and 25.1385(c) as amended by Amendments 25-1 through 25-38.

(b) Addition for the Bendix EFS-10, Sperry EDZ-600, Sperry EDZ-601, and Sperry EDZ-603 Electronic Flight Instrument Systems only:

FAR §§ 25.1301, 25.1303(b), 25.1322 as amended by Amendments 25-1 through 25-38; and §§ 25.1309, 25.1321(a), (b), (d), and (e), 25.1331, 25.1333, 25.1335 as amended by Amendments 25-1 through 25-41.

- (2) FAR Part 36 effective December 1, 1969.
- (3) SFAR 27, as amended by Amendments 27-1 and 27-2, fuel venting.
- (3) Special Conditions as follows:
  - (a) 25-25-CE-4, additional requirements for systems, airframe, flight and propulsion. See note 28.
- (4) Equivalent levels of safety as follows:
  - (a) FAR § 25.807(d), Emergency exits ditching;
  - (b) FAR § 25.1199(b) and (c), Fire Bottle Pressure Relief Valve;
  - (c) FAR § 25.1439(b)(2)(ii), Protective Eye Equipment;
  - (d) FAR § 25.815, Passenger Cabin Aisle Width;
  - (e) FAR § 25.1305(r), Use of  $N_1$  for Power Presentation;
  - (f) FAR § 25.773(b)(2), Use of clear vision area of windshield; and
  - (g) FAR § 25.1331(a)(1), Location of pressure gage to indicate adequate power to bank and pitch indicator.
  - (h) FAR § 25.1549(a) and (b), N<sub>2</sub> Digital Indicator Markings.
- (5) FAR § 25.801 ditching not complied with.

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(6) Compliance with ice protection has been demonstrated in accordance with FAR § 25.1419.

Serial Nos. Eligible: 550-0001 through 550-0505 and 550-0550 through 550-0800 (See Note 19)

III - Model S550, Citation S/II, (Transport Category), Approved August 15, 1984

The Model S550 Citation S/II is defined by Cessna Airplane Assembly Drawing Number 6500000.

Engines Two Pratt and Whitney Canada, Inc. (formerly United Aircraft of Canada Ltd.) JT15D-

4B turbofans.

Fuel Jet A, Jet A-1, Jet B, JP-4, JP-5 or JP-8. For required use of anti-icing additives and

emergency use of aviation gasoline, refer to the FAA Approved Airplane Flight Manual.

Engine Limits Static thrust, standard day, sea level:

Takeoff (5 min.) 2500 lb. Max. continuous 2375 lb.

Max. permissible engine rotor operating speeds:

 $N_1$  (Fan) 106 percent 16,854 r.p.m.  $N_2$  (Gas Gen.) 97 percent 31,777 r.p.m.

Max. permissible interturbine gas temperatures:

Takeoff $710^{\circ}$  C.Max. continuous $690^{\circ}$  C.Starting $500^{\circ}$  C.Transient (2 seconds) $730^{\circ}$  C.

Airspeed Limits  $V_{MO}$  (Maximum operating)

Sea level to 8,000 ft. 260 KCAS (261 KIAS) 8,000 ft. to 29,315 ft. 275 KCAS (276 KIAS)

M<sub>MO</sub> Above 29,315 ft. 0.72 Mach (0.72 MIAS)

V<sub>A</sub> (Sea level)

14,700 lb. 192 KCAS (192 KIAS)

See AFM for variations with weight and altitude

V<sub>FE</sub> (Flaps extended)

V<sub>LO</sub> (Landing gear operating) 174 KCAS (172 KIAS)

 $V_{LE} \ (Landing \ gear \ extended) \\ V_{SB} \ (Speed \ brakes \ extended) \\ Any \ speed \ with \ or \ without \ flaps$ 

See NOTE 21 for increased  $V_{LO}$  and  $V_{LE}$ .

Tire Limit Maximum ground speed 165 knots

C.G. Range (Landing Gear Extended) S/N S550-0001 through S550-0085

Forward Limits: Linear variation from 277.7 in. aft of datum (19.9% MAC) at 14,700 lb. to 273.7 in. aft of

datum (15.0% MAC) at 9,600 lb.; 273.1 in. aft of datum (15.0% MAC) at 9,600 lb. or

less.

Aft Limits: 284.2 in. aft of datum (28.0 % MAC) at 14,700 lb. or less.

C.G. Range (Landing Gear Extended) S/N S550-0086 through 550-0160

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Forward Limits: Linear variation from 278.0 in. aft of datum (20.3% MAC) at 15,100 lb. to 273.7 in. aft of

datum (15.0% MAC) at 9,600 lb.; 273.1 in. aft of datum (15.0% MAC) at 9,600 lb. or

less.

Aft Limits: 284.2 in. aft of datum (28.0 % MAC) at 15,100 lb. or less.

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# III - Model S550, Citation S/II, (Transport Category), Approved August 15, 1984 (Cont'd)

Empty Wt. C.G. Range None

Datum 94.0 in. forward of the front face of the forward pressure bulkhead.

MAC 80.98 in. (L.E. of MAC at Sta. +261.56)

NOTE: This is reference MAC for basic wing without tip.

Leveling Means Seat Rails

S/N S550-0001 S/N S550-0086 Maximum Weight Through S550-0085 Through S550-0160 Takeoff 14,700 lb. 15,100 lb. Landing 14,000 lb. 14,400 lb. Zero fuel 11,000 lb. 11,200 lb. Ramp 14,900 lb. 15,300 lb.

Minimum Crew For all flights: 2 persons (pilot and co-pilot)

No. of Seats 8 to 13 (2 pilots, 6 to 11 passengers)

Maximum Baggage Nose Compartment 350 lb. (at Sta. + 74.0)Aft Cabin 400 lb. (at Sta. +321.0) 200 lb. (at Sta. +338.0) Tailcone 200 lb. (at Sta. +442.0) 300 lb. (at Sta. +414.0)

Fuel Capacity (Gal.) Two wing tanks: Total 437 each; usable 431.5 each

ARM = +282.7 in.

See NOTE 1 for data on unusable fuel

Oil Capacity (Quarts) Two engine mounted tanks: Total 9.0 each; usable 5.7 each

ARM = +367.0 in.

Surface Anti-Ice Fluid Capacity: 65.5 lb., ARM = +62.9 in.

Surface anti-ice fluids must meet British Deicing Fluid Specification DTD 406B

(NATO Symbol S-745). Fluids meeting this specification are: Canyon Industries AL-5,

Aero Shell Compound 07, and BP Aero Deicing 2

Windshield Anti-Ice Fluid Capacity: 3.4 lb., ARM = +91.4 in.; TT-I-735 Isopropyl alcohol Approved

Maximum Operating

Altitude

43,000 ft.

Control Surface Elevator 20° <u>+</u>1° Down  $15^{\circ} + 1^{\circ}$ Up Down  $17^{\circ} + 1^{\circ}$ ,  $-0^{\circ}$ Movements Elevator trim tab Up  $5^{\circ} + 1^{\circ}, -0^{\circ}$ 

Rudder Right  $22^{\circ} \pm 1^{\circ}$ Left  $22^{\circ} \pm 1^{\circ}$ 

(perpendicular to hinge)

Rudder trim tab 10° ±1° Left  $10^{\circ} \pm 1^{\circ}$ Right

(perpendicular to hinge)

Aileron 19° <u>+</u>1° Down 15° ±1° Up Aileron trim tab Up 20° <u>+</u>1° Down 20° ±1°

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Wing flap Down  $0^{\circ}$  to  $35^{\circ} \pm 1^{\circ}$ 

Speed brake - Upper Up  $0^{\circ}$  to  $58^{\circ} \pm 2^{\circ}$ 

See Airplane Maintenance Manual for rigging instructions

#### III - Model S550, Citation S/II, (Transport Category), Approved August 15, 1984 (Cont'd)

#### Certification Basis

- (1) Part 25 of the Federal Aviation Regulations effective February 1, 1965, as amended by Amendments 25-1 through 25-17;
  - (a) Additions:

FAR §§ 25.251(e), 25.934 and 25.1091(d)(2) as amended by Amendments 25-1 through 25-23; § 25.1401 as amended by Amendments 25-1 through 25-27; § 25.1387 as amended by Amendments 25-1 through 25-30; §§ 25.787, 25.789, 25.791, 25.853, 25.855, 25.857, 25.1359 as amended by Amendments 25-1 through 25-32; §§ 25.1303(a)(2) and 25.1385(c) as amended by Amendments 25-1 through 25-38;

(b) Addition for the Bendix EFS-10, Sperry EDZ-600, Sperry EDZ-601, and Sperry EDZ-603 Electronic Flight Instrument Systems only:

FAR §§ 25.1301, 25.1303(b), 25.1322 as amended by Amendments 25-1 through 25-38; and §§ 25.1309, 25.1321(a), (b), (d), and (e), 25.1331, 25.1333, 25.1335 as amended by Amendments 25-1 through 25-41.

- (2) FAR Part 36 effective December 1, 1969, as amended by Amendments 36-1 through 36-12.
- (3) SFAR 27, as amended by Amendments 27-1 and 27-2, fuel venting.
- (4) Special Conditions as follows:
  - (a) 25-25-CE-4, additional requirements for systems, airframe, flight and propulsion. See note 28.
- (5) Equivalent levels of safety as follows:
  - (a) FAR § 25.807(d), Emergency exits ditching;
  - (b) FAR § 25.1199(b) and (c), Fire Bottle Pressure Relief Valve;
  - (c) FAR § 25.1439(b)(2)(ii), Protective Eye Equipment;
  - (d) FAR § 25.815, Passenger Cabin Aisle Width;
  - (e) FAR § 25.1305(r), Use of  $N_1$  for Power Presentation;
  - (f) FAR § 25.773(b)(2), Use of clear vision area of windshield; and
  - (g) FAR § 25.1331(a)(1), Location of pressure gage to indicate adequate power to bank and pitch indicator.
  - (h) FAR § 25.1549(a) and (b), N<sub>2</sub> Digital Indicator Markings.
  - (i) FAR § 25.813(e), Frangible door.
- (6) FAR § 25.801 ditching not complied with.
- (7) Compliance with ice protection has been demonstrated in accordance with FAR § 25.1419.

Serial Nos. Eligible: S550-0001 through S550-0160

#### IV - Model 552, Navy T-47A, (Transport Category), Approved November 21, 1984

The Model 552 (Navy T-47A) is defined by Cessna Airplane Assembly Drawing Number 6400001.

Two Pratt and Whitney Canada, Inc. (formerly United Aircraft of Canada, Ltd.) JT15D-5 turbofans.

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Fuel

Jet A, Jet A-1, Jet B, JP-4, JP-5 or JP-8. For required use of anti-icing additives, refer to the FAA Approved Airplane Flight Manual.

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# IV - Model 552, Navy T-47A, (Transport Category), Approved November 21, 1984 (Cont'd)

Engine Limits Static thrust, standard day, sea level:

Takeoff (5 min.) 2900 lb.
Max. continuous 2900 lb.

Max. permissible engine rotor operating speeds:

 $N_1$  (Fan) 104 percent 16,540 r.p.m.  $N_2$  (Gas Gen.) 96 percent 31,450 r.p.m.

Max. permissible interturbine gas temperatures:

Takeoff $700^{\circ}$  C.Max. continuous $680^{\circ}$  C.Starting $550^{\circ}$  C.Transient (2 seconds) $720^{\circ}$  C.

Airspeed Limits  $V_{MO}$  (Maximum operating)

 Sea level
 355 KCAS (358 KIAS)

 27,425 ft.
 299 KCAS (300 KIAS)

Linear variation between altitudes

M<sub>MO</sub> Above 27,425 ft. 0.75 Mach (0.755 MIAS)

V<sub>A</sub> (Sea level)

15,500 lb. 215 KCAS (216 KIAS) See AFM for variations with weight and altitude and optional configurations.

 $V_{\text{FE}}$  (Flaps extended)

V<sub>LO</sub> (Landing gear operating) 174 KCAS (173 KIAS)

 $V_{LE}$  (Landing gear extended) 174 KCAS (173 KIAS)  $V_{SB}$  (Speed brakes extended Any speed with or without flaps

Tire Limit Maximum ground speed 165 knots

C.G. Range (Landing Gear Extended)

Forward Limits: Linear variation from 279.1 in. aft of datum (21.69% MAC) at 15,500 lb. to 274.4 in. aft

of datum (15.82% MAC) at 9,400 lb.; 274.4 in. aft of datum (15.82% MAC) at 9,400

lb. or less.

Aft Limits: 282.6 in. aft of datum (26.0 % MAC) at 15,500 lb. or less.

Empty Wt. C.G. Range None

Datum 94.0 in. forward of the front face of the forward pressure bulkhead.

MAC 80.98 in. (L.E. of MAC at Sta. +261.56)

NOTE: This is reference MAC for basic wing without cuff

Leveling Means Seat Rails

Maximum Weight	Takeoff	15,500 lb.
	Landing	14,300 lb.
	Zero fuel	10,500 lb.
	Ramp	15,679 lb.

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### IV - Model 552, Navy T-47A, (Transport Category), Approved November 21, 1984 (Cont'd)

Minimum Crew For all flights: 2 Pilots

No. of Seats 6 (2 pilots, 4 passengers)

Maximum Baggage None

Fuel Capacity (Gal.) Two wing tanks: Total 414 each; usable 412 each

ARM = +282.7 in.

See NOTE 1 for data on unusable fuel

Oil Capacity (Quarts) Two engine mounted tanks: Total 8.1 each; usable 4.8 each

ARM +367.0 in.

Fluid Anti-Ice System Capacity: 65.5 lb. ARM 86.3 in.

(Airframe) Surface anti-ice fluids must meet British Deicing Fluid Specification DTD 406B

(NATO Symbol S-745). Fluids meeting this specification are: Canyon Industries AL-5,

Aero Shell Compound 07, and BP Aero Deicing 2

Windshield Anti-Ice Capacity: 3.4 lb. ARM 91.4 in.

Fluid Approved Anti-Ice Fluid: TT-I-735 Isopropyl Alcohol

Maximum Operating 43,000 ft.

Altitude

Control Surface Elevator Up  $20^{\circ} \pm 1^{\circ}$  Down  $15^{\circ} \pm 1^{\circ}$  Movements Elevator trim tab Up  $5^{\circ} + 1^{\circ}$ ,  $-0^{\circ}$  Down  $17^{\circ} + 1^{\circ}$ ,  $-0^{\circ}$ 

Rudder Right  $22^{\circ} \pm 1^{\circ}$  Left  $22^{\circ} \pm 1^{\circ}$ 

(perpendicular to hinge)

Rudder trim tab Right  $10^{\circ} \pm 1^{\circ}$  Left  $10^{\circ} \pm 1^{\circ}$ 

(perpendicular to hinge)

Aileron Up  $16^{\circ} + 2^{\circ}$ ,  $-0^{\circ}$  Down  $14^{\circ} + 2^{\circ}$ ,  $-0^{\circ}$  Wing flap Down  $0^{\circ}$  to  $35^{\circ} \pm 1^{\circ}$ 

Speed brake - Upper Up  $0^{\circ}$  to  $58^{\circ} \pm 2^{\circ}$ 

See Airplane Maintenance Manual for rigging instructions

#### Certification Basis

(1) Part 25 of the Federal Aviation Regulations effective February 1, 1965, as amended by Amendments 25-1 through 25-17;

(a) Additions:

FAR §§ 25.251(e), 25.934 and 25.1091(d)(2) as amended by Amendments 25-1 through 25-23; § 25.1401 as amended by Amendments 25-1 through 25-27; § 25.1387 as amended by Amendments 25-1 through 25-30; §§ 25.1303 and 25.1385(c) as amended by Amendments 25-1 through 25-38; § 25.255 as amended by Amendments 25-1 through 25-42; and § 25.1001 as amended by Amendments 25-1 through 25-57.

(b) Addition for aileron boost system only: FAR §§ 25.671 and 25.672 as amended by Amendments 25-1 through 25-23.

(2) FAR Part 36 effective December 1, 1969, as amended by Amendments 36-1 through 36-12.

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(3) SFAR 27, as amended by Amendments 27-1 and 27-2, fuel venting.

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#### IV - Model 552, Navy T-47A, (Transport Category), Approved November 21, 1984 (Cont'd)

Certification Basis (Cont'd)

- (4) Special Conditions as follows:
  - (a) 25-25-CE-4, additional requirements for systems, airframe, flight and propulsion. See note 28.
- (5) Equivalent levels of safety as follows:
  - (a) FAR § 25.807(d), Emergency exits ditching;
  - (b) FAR § 25.1199(b) and (c), Fire Bottle Pressure Relief Valve;
  - (c) FAR § 25.1439(b)(2)(ii), Protective Eye Equipment;
  - (d) FAR § 25.815, Passenger Cabin Aisle Width;
  - (e) FAR § 25.1305(r), Use of  $N_1$  for Power Presentation;
  - (f) FAR § 25.773(b)(2), Use of clear vision area of windshield; and
  - (g) FAR § 25.1549(a) and (b), N<sub>2</sub> Digital Indicator Markings.
- (5) Exemption: Exemption number NM-105 granted. Model 552 exempt from requirements of FAR §§ 25.1303 and 25.1321 for required instruments, instrument panel arrangement and visibility of instruments.
- (6) FAR § 25.801 ditching not complied with.
- (7) Compliance with ice protection has been demonstrated in accordance with FAR § 25.1419.

Serial Nos. Eligible: 552-0001 through 552-0015 (See Note 23)

## V - Model 560, Citation V and Citation Ultra, (Transport Category), Approved December 9, 1988

The Model 560 Citation V and Citation Ultra are defined by Cessna Airplane Assembly Drawing Number 6500560.

Engines S/N 560-0001 through 560-0259

Two Pratt & Whitney of Canada, Inc.

JT15D-5A turbofans

S/N 560-0260 through 560-0538 Two Pratt & Whitney of Canada, Inc.

JT15D-5D turbofans

Fuel Jet A, Jet A, Jet B, JP-4, JP-5 or JP-8. For required use of anti-icing additives and

emergency use of aviation gasoline, refer to the FAA Approved Airplane Flight Manual.

TT15D 5 A

Engine Limits Static thrust, standard day, sea level:

	<u>JT15D-5A</u>	<u>JTT5D-5D</u>
Takeoff (5 min.)	2900	3045
Max. continuous	2900	3045

Max. permissible engine rotor operating speeds:

	<u>JT15D-</u> 5A	JT15D <u>-5D</u>
N <sub>1</sub> (Fan)	104%	100%
	16540 r.p.m.	16860 rpm
N <sub>2</sub> (Gas Gen.)	96%	97%
2 ( )	31450 rpm	31777 rpm

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Engine Limits (Cont.) Max. permissible interturbine gas temperatures:

	I	
	<u>JT15D-</u> 5A	JT15D-5D
Takeoff	700° C	720° C
Max. continuous	680° C	700° C
Starting	550° C	550° C
Transient (2 seconds)	720° C	740° C

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# V - Model 560, Citation V and Citation Ultra, (Transport Category), Approved December 9, 1988 (Cont'd)

Airspeed Limits  $V_{MO}$  (Maximum operating)

 Sea level to 8000 ft.
 260 KCAS (261 KIAS)

 8000 ft. to 28,907 ft.
 290 KCAS (292 KIAS)\*

M<sub>MO</sub> Above 28,907 ft. 0.75 Mach (0.755 MIAS)

 $V_A$  (Sea level)

15,900 lb. 201 KCAS (202 KIAS)

See AFM for variations with weight and altitude

 $V_{FE}$  (Flaps extended)

 35° (Landing)
 174 KCAS (173 KIAS)

 15° (Takeoff and approach)
 199 KCAS (200 KIAS)

 7° (Takeoff)
 199 KCAS (200 KIAS)

\*See NOTE 7 for restricted  $V_{MO}$  for optional fuel weight configuration

 $\begin{array}{lll} V_{MCA} & (Minimum\ control\ speed)\ Air & 84\ KCAS\ (\ 85\ KIAS) \\ V_{MCG} & (Minimum\ control\ speed)\ Ground & 85.5\ KCAS\ (\ 86\ KIAS) \\ V_{LO} & (Landing\ gear\ operating\ extend) & 249\ KCAS\ (250\ KIAS) \\ V_{LO} & (Landing\ gear\ operating\ retract) & 199\ KCAS\ (200\ KIAS) \end{array}$ 

 $V_{LE}$  (Landing gear extended) 290 KCAS (292 KIAS)

V<sub>SB</sub> (Speed brakes extended Any speed with or without flaps

See NOTE 22 for  $V_{LO}$  and  $V_{LE}$  for 12,200 lb. ZFW option and gravel kit.

Tire Limit Maximum ground speed 165 knots

C.G. Range (Landing Gear Extended) S/N 560-0001 through 560-0259

Forward Limits: Linear variation from 296.03 in. aft of datum (17.87% MAC) at 15,900 lb. to 293.71 in.

aft of datum (15.0% MAC) at 11,500 lb.; 293.71 in. aft of datum (15.0% MAC) at

11,500 lb. or less.

Aft Limits: 304.23 in. aft of datum (28.0 % MAC) at 15,900 lb. or less.

C.G. Range (Landing Gear Extended) S/N 560-0260 through 560-0538

Forward Limits: Linear variation from 296.24 in. aft of datum (18.13% MAC) at 16,300 lb. to 293.71 in.

aft of datum (15.0% MAC) at 11,500 lb.; 293.71 in. aft of datum (15.0% MAC) at

11,500 lb. or less.

Aft Limits: 304.23 in. aft of datum (28.0 % MAC) at 16,300 lb. or less.

Empty Wt. C.G. Range None

Datum 94.0 in. forward of the front face of the forward pressure bulkhead.

MAC 80.98 in. (L.E. of MAC at Sta. +281.56)

NOTE: This is reference MAC for basic wing without leading edge cuff and tip

Leveling Means Seat Rails

Maximum Weight <u>S/N 560-0001</u> S/N 560-0260

<u>Through 560-0259</u> <u>Through 560-0538</u>

Takeoff 15,900 lb. 16,300 lb.

Landing 15,200 lb. 15,200 lb.

Zero fuel 11,200 lb.\* 12,200 lb. Ramp 16,100 lb. 16,500 lb.

<sup>\*</sup>See NOTE 7 for optional zero fuel weight

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# V - Model 560, Citation V and Citation Ultra, (Transport Category), Approved December 9, 1988 (Cont'd)

Minimum Crew For all flights: 2 persons (pilot and co-pilot)

No. of Seats 9 to 13 (2 pilots, 7 to 11 passengers)

Maximum Baggage Nose Compartment S/N 560-0001 through 560-0259 350 lb. (at Sta. + 74.0)

Nose Compartment S/N 560-0260 through 560-0538 310 lb. (at Sta. + 74.0)
Aft Cabin 600 lb. (at Sta. +348.0)
Tailcone 300 lb. (at Sta. +434.0)
200 lb. (at Sta. +462.0)

Fuel Capacity (Gal.) Two wing tanks: Total 431.9 each; usable 430.5 each

ARM = 302.7 in.

See NOTE 1 for data on unusable fuel

Oil Capacity (Quarts) S/N 560-0001 through 560-0259

Two engine-mounted tanks: Total 8.1 each; usable 4.8 each

ARM = +387.0 in.

S/N 560-0260 through 560-0538

Two engine mounted tanks: Total 8.4 each; usable 4.7 each

ARM: +387.0 in.

Windshield Anti-Ice Capacity: 3.4 lb., ARM = +91.4 in.

Fluid Approved Anti-Ice Fluids: TT-I-735 Isopropyl alcohol

Maximum Operating 45,000 ft.

Altitude

Control Surface Elevator Up  $22^{\circ} + 1/2^{\circ}$ ,  $-1^{\circ}$  Down  $15^{\circ} \pm 1^{\circ}$  Movements Elevator trim tab Up  $4 - 1/2^{\circ} + 1^{\circ}$ ,  $-0^{\circ}$  Down  $16^{\circ} + 1/2^{\circ}$ ,  $-0^{\circ}$ 

Rudder Right  $22^{\circ} + 1^{\circ}, -0^{\circ}$  Left  $22^{\circ} + 1^{\circ}, -0^{\circ}$ 

(perpendicular to hinge)

Rudder trim tab Right  $10^{\circ} \pm 1^{\circ}$  Left  $10^{\circ} \pm 1^{\circ}$ 

(perpendicular to hinge)

Aileron Up  $19^{\circ}\pm1^{\circ}$  Down  $15^{\circ}\pm1^{\circ}$ Aileron trim tab Up  $20^{\circ}\pm1^{\circ}$  Down  $20^{\circ}\pm1^{\circ}$ Wing flap Down  $0^{\circ}$  to  $35^{\circ}+1^{\circ}$ 

Speed brake Upper  $0^{\circ}$  to  $58^{\circ} + 2^{\circ}$ ,  $-0^{\circ}$ 

See Airplane Maintenance Manual for rigging instructions

Certification Basis - Citation V - S/N 560-0001 through 560-0259:

(1) Part 25 of the Federal Aviation Regulations effective February 1, 1965, as amended by Amendments 25-1 through 25-17;

(a) Additions:

FAR §§ 25.251(e), 25.934 and 25.1091(d)(2) as amended by Amendments 25-1 through 25-23; § 25.1401 as amended by Amendments 25-1 through 25-27; § 25.1387 as amended by Amendments 25-1 through 25-30; §§

25.787, 25.789, 25.791, 25.853, 25.855, 25.857, and 25.1359 as amended by Amendments 25-1 through 25-32; §§ 25.1303(a)(2) and 25.1385(c) as amended by Amendments 25-1 through 25-38.

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#### V - Model 560, Citation V and Citation Ultra, (Transport Category), Approved December 9, 1988 (Cont'd)

Certification Basis - Citation V - S/N 560-0001 through 560-0259 (Cont'd):

(b) Additions for the Honeywell (Sperry) EDZ-603 and EDZ-605 Electronic Flight Instrument Systems only:

FAR §§ 25.1301, 25.1303(b), 25.1322 as amended by Amendments 25-1 through 25-38; §§ 25.1309, 25.1321(a), (b), (d), and (e), 25.1331, 25.1333, and 25.1335 as amended by Amendments 25-1 through 25-41.

- (2) FAR Part 36 effective December 1, 1969, as amended by Amendments 36-1 through 36-15.
- (3) SFAR 27, as amended by Amendments 27-1 and 27-6, fuel venting.
- (4) Special Conditions as follows:
  - (a) 25-25-CE-4, additional requirements for systems, airframe, flight and propulsion. See note 28.
  - (b) 25-ANM-21, additional requirements for High Altitude Operation (45,000 feet). See note 26.
- (5) Equivalent levels of safety as follows:
  - (a) FAR § 25.807(d), Emergency exits ditching;
  - (b) FAR § 25.1199(b) and (c), Fire Bottle Pressure Relief Valve;
  - (c) FAR § 25.815, Passenger Cabin Aisle Width;
  - (d) FAR § 25.1305(r), Use of  $N_1$  for Power Presentation;
  - (e) FAR § 25.773(b)(2), Use of clear vision area of windshield; and
  - (f) FAR § 25.1549(a) and (b), N<sub>2</sub> Digital Indicator Markings.
  - (g) FAR § 25.813(e), Frangible door.
- (6) FAR § 25.801 ditching not complied with.
- (7) Compliance with ice protection has been demonstrated in accordance with FAR § 25.1419.

Certification Basis - Citation Ultra - S/N 560-0260 through 560-0538:

- (1) Part 25 of the Federal Aviation Regulations effective February 1, 1965, as amended by Amendments 25-1 through 25-17;
  - (a) Additions:

FAR §§ 25.251(e), 25.934 and 25.1091(d)(2) as amended by Amendments 25-1 through 25-23; § 25.1401 as amended by Amendments 25-1 through 25-27; § 25.1387 as amended by Amendments 25-1 through 25-30; §§ 25.787, 25.789, 25.791, 25.853, 25.855, 25.857, and 25.1359 as amended by Amendments 25-1 through 25-32; §§ 25.1303(a)(2) and 25.1385(c) as amended by Amendments 25-1 through 25-38; § 25.305 as amended by Amendments 25-1 through 25-54; § 25.1001 as amended by Amendments 25-1 through 25-57.

- (b) Additions for the Honeywell Primus 1000 Electronic Flight Instrument Systems only: FAR §§ 25.1301, 25.1303(b), 25.1322 as amended by Amendments 25-1 through 25-38; §§ 25.1309, 25.1321(a), (b), (d), and (e), 25.1331, 25.1333, and 25.1335 as amended by Amendments 25-1 through 25-41.
- (2) FAR Part 36 effective December 1, 1969, as amended by Amendments 36-1 through 36-15.
- (3) FAR Part 34 effective September 10, 1990, Fuel Venting and Exhaust Emission Requirements for Turbine Engine Powered Airplanes.

- (4) Special Conditions as follows:
  - (a) 25-25-CE-4, additional requirements for systems, airframe, flight and propulsion. See note 28.
  - (b) 25-ANM-21, additional requirements for High Altitude Operation (45,000 feet). See note 26.
  - (c) 25-ANM-79, additional requirements for Lighting and High Intensity Radiated Fields (HIRF).

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#### V - Model 560, Citation V and Citation Ultra, (Transport Category), Approved December 9, 1988 (Cont'd)

Certification Basis - Citation Ultra - S/N 560-0260 through 560-0538 (Cont'd):

- (5) Equivalent levels of safety as follows:
  - (a) FAR § 25.807(d), Emergency exits ditching;
  - (b) FAR § 25.1199(b) and (c), Fire Bottle Pressure Relief Valve;
  - (c) FAR § 25.815, Passenger Cabin Aisle Width;
  - (d) FAR § 25.1305(r), Use of  $N_1$  for Power Presentation;
  - (e) FAR § 25.773(b)(2), Use of clear vision area of windshield; and
  - (f) FAR § 25.1549(a) and (b), N<sub>2</sub> Digital Indicator Markings.
  - (g) FAR § 25.813(e), Frangible door.
- (6) FAR § 25.801 ditching not complied with.
- (7) Compliance with ice protection has been demonstrated in accordance with FAR § 25.1419.

Serial Nos. Eligible: 560-0001 through 560-0259 (Citation V)

560-0260 through 560-0538 (Citation Ultra)

#### VI - Model 550, (Bravo), (Transport Category), Approved January 8, 1997

The Model 550 Bravo is defined by Cessna Airplane Assembly Drawing Number 6500000.

Engines Two Pratt & Whitney of Canada, Inc.

PW530A Turbofans

Fuel Jet A, Jet A-1, Jet B, JP-5, or JP-8. For use of anti-icing additives, refer to the FAA

Approved Airplane Flight Manual.

Engine Limits Static thrust, standard day, sea level:

Takeoff (5 min.) 2887 lb. Max. continuous 2843 lb.

Max. permissible engine rotor operating speeds:

N<sub>1</sub> (Fan) PW530A 100 percent 15,750 r.p.m. N<sub>2</sub> (Gas Gen.) 100 percent 32,150 r.p.m.

Max. permissible interturbine gas temperatures:

Takeoff $700^{\circ}$  C.Max. continuous $700^{\circ}$  C.Starting $690^{\circ}$  C.Transient (20 seconds) $740^{\circ}$  C.

Airspeed Limits V<sub>MO</sub> (Maximum operating)

Sea level to 8,000 ft. 260 KCAS (260 KIAS) 8,000 ft. to 27,900 ft. 275 KCAS (275 KIAS)

M<sub>MO</sub> Above 27,900 ft. 0.70 Mach (0.70 MIAS)

V<sub>A</sub> (Sea level)

14,800 lb. 190 KCAS (190 KIAS)
See AFM for variations with weight, altitude and optional configurations.

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 $\begin{array}{lll} V_B & \text{(Speed for max. gust intensity)} & 210 \text{ KCAS (210 KIAS)} \\ V_{EE} & \text{(Flaps extended)} & & & \\ 40^\circ & \text{(Landing)} & 174 \text{ KCAS (174 KIAS)} \\ 15^\circ & \text{(Takeoff and Approach)} & 200 \text{ KCAS (200 KIAS)} \\ V_{MCA} & \text{(Minimum control speed) Air} & 79 \text{ KCAS (} & 78 \text{ KIAS)} \\ V_{MCG} & \text{(Minimum control speed) Ground} & 92 \text{ KCAS (} & 89 \text{ KIAS)} \\ \end{array}$ 

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# VI - Model 550, (Bravo), (Transport Category), Approved January 8, 1997 (Cont'd)

Airspeed Limits (Cont'd)

 $\begin{array}{lll} V_{LO} \ (Landing \ gear \ operating \ extend) & 250 \ KCAS \ (250 \ KIAS) \\ V_{LO} \ (Landing \ gear \ operating \ retract) & 200 \ KCAS \ (200 \ KIAS) \\ V_{LE} \ (Landing \ gear \ extended) & 260 \ KCAS \ (260 \ KIAS) \end{array}$ 

 $V_{SB}$  (Speed brakes extend or retract) Any speed with or without flaps

Tire Limit Maximum ground speed 165 knots

C.G. Range (Landing Gear Extended)

Forward Limits: Linear variation from 280.97 in. aft of datum (23.99% MAC) at 14,800 lb. to 276.57 in. aft

of datum (18.54 % MAC) at 9,147 lb.

Aft Limits: 285.8 in. aft of datum (30.0 % MAC) from 14,800 lb. through 8,670 lbs.

Empty Wt. C.G. Range None

Datum Zero reference datum is 93.7 inches forward of the nose jack point.

MAC 80.98 in. (Leading edge of MAC 261.56 in. aft of datum)

Leveling Means Lower seat rail RBL 9.0 in. starting at 206.0 in aft of datum.

Maximum Weight Takeoff 14,800 lb.

Landing 13,500 lb. Zero fuel 11,300 lb. Ramp 15,000 lb.

Minimum Weight Inflight Forward C.G. Limit: 9,147 lb. Aft C.G. Limit: 8,670 lb.

Note: Linear variation between forward and aft limits.

Minimum Crew For all flights: 2 persons (pilot and co-pilot)

No. of Seats 8 to 13 (2 pilots, 6 to 11 passengers)

See NOTE 12

Maximum Baggage Nose compartment (w/std equip.) 350 lb. at Sta. + 74.0

Aft cabin 600 lb. at Sta. +321.0 Tailcone 300 lb. at Sta. +414.0 and

200 lb. at Sta. +442.0

Fuel Capacity (Gal.) Two wing tanks: Total 363.5 each; usable 360 each

ARM 287.0 in.

See NOTE 1 for data on unusable fuel

Oil Capacity (Quarts) Two engine mounted tanks: Total 5.0 each; usable 1.9 each

ARM 366.85 in

Maximum Operating 43,000 ft. (S/N 550-0801 through 550-0820)

Altitude (S/N 550-0822 through 550-0823)

45,000 ft. (S/N 550-0821, 550-0824 and on)

See NOTE 25 for S/N 550-0801

through 550-0820 & 550-0822 through 550-0823

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# VI - Model 550, (Bravo), (Transport Category), Approved January 8, 1997 (Cont'd)

Control Surface Elevator Up 20° +1° Down 15° ±1° Movements Elevator trim tab Up  $7^{\circ} + 1^{\circ}, -1^{\circ}$ Down  $8^{\circ} + 1^{\circ}$ ,  $-1^{\circ}$ Rudder Right  $22^{\circ} + 1^{\circ}$ Left 22° +1° (perpendicular to hinge) Right  $10^{\circ} + 1^{\circ}$ Left 10° +1° Rudder trim tab (perpendicular to hinge) Up 19° <u>+</u>1° Aileron Down 15° ±1° Aileron trim tab Up 20° <u>+</u>1° Down 20° +1° Down  $0^{\circ}$  to  $40^{\circ} + 1^{\circ}$ Wing flap Up  $0^{\circ}$  to  $58^{\circ} + 2^{\circ}$ Speed brake - Upper See Airplane Maintenance Manual for rigging instructions

#### Certification Basis - S/N 550-0801 and on:

- (1) Part 25 of the Federal Aviation Regulations effective February 1, 1965, as amended by Amendments 25-1 through 25-17;
  - (a) Additions:

FAR § 25.1401, as amended by Amendments 25-1 through 25-27; § 25.1387, as amended by Amendments 25-1 through 25-30; §§ 25.1303(a)(2) and 25.1385(c), as amended by Amendments 25-1 through 25-38; § 25.305, as amended by Amendments 25-1 through 25-54; §§ 25.125, 25.251, 25.337, 25.493, 25.731, 25.733, 25.735, 25.867, 25.869, 25.901, 25.903, 25.933, 25.934, 25.939, 25.943, 25.951, 25.952, 25.1001, 25.1041, 25.1043, 25.1045, 25.1091, 25.1093, 25.1103, 25.1121, 25.1123, 25.1143, 25.1163, 25.1165, 25.1181, 25.1183, 25.1185, 25.1189, 25.1195, 25.1197, 25.1203, 25.1205 (revoked), 25.1207, 25.1305, 25.1316, 25.1322, 25.1326, 25.1337, 25.1351, 25.1438, 25.1521, 25.1549 and 25.1551, as amended by 25-1 through 25-82.

- (b) Additions for the Electronic Flight Instrument Systems only: FAR §§ 25.1301, and 25.1303(b) as amended by Amendments 25-1 through 25-38; §§ 25.1309, 25.1321(a), (b), (d), and (e), 25.1331, 25.1333, and 25.1335 as amended by Amendments 25-1 through 25-41.
- (c) Additions for airplanes approved for High Altitude Operation (45,000 feet) only:
  - 1. FAR §§ 25.571(b)(5) and 25.1529 as amended by Amendments 25-1 through 25-82. Compliance with the requirements of § 25.571(b)(5) is limited to the fuselage. The inspection intervals for compliance with § 25.1529 are to address a crack growth propagating for a period encompassing four normal inspection intervals. See Note 26.
  - 2. FAR §§ 25.365, 25.831, 25.841, and 25.1447 as amended by Amendments 25-1 through 25-87.
- (2) FAR Part 36 effective December 1, 1969, as amended by Amendments 36-1 through 36-21.
- (3) FAR Part 34 effective September 10, 1990, as amended by Amendment 34-1, Fuel Venting and Exhaust Emission Requirements for Turbine Engine Powered Airplanes.
- (4) Special Conditions as follows:
  - (a) 25-ANM-120, additional requirements for High Intensity Radiated Fields (HIRF).
- (5) Equivalent levels of safety as follows:
  - (a) FAR § 25.807(d), Emergency exits ditching;
  - (b) FAR § 25.815, Passenger Cabin Aisle Width;

- (c) FAR § 25.773(b)(2), Use of clear vision area of windshield; and
- (d) FAR § 25.1549(a) and (b),  $N_2$  Digital Indicator Markings.
- (6) FAR § 25.801 ditching not complied with.

# VI - Model 550, (Bravo), (Transport Category), Approved January 8, 1997 (Cont'd)

Certification Basis - S/N 550-0801 and on (Cont'd):

(7) Compliance with ice protection has been demonstrated in accordance with FAR § 25.1419.

Serial Nos. Eligible: 550-0801 and on

# VII - Model 560XL, (Excel), (Transport Category), Approved April 22, 1998.

The Model 560XL Excel is defined by Cessna Airplane Assembly Drawing Number 6600000.

Engines Two Pratt & Whitney of Canada, Inc.

PW545A Turbofans

Fuel Jet A, Jet A-1, JP-5, or JP-8. For use of anti-icing additives, refer to the FAA

Approved Airplane Flight Manual.

Engine Limits Static thrust standard day, sea level:

Takeoff (5 min.) 3804 lb. Max. continuous 3804 lb.

Max. permissible engine rotor operating speeds (PW 545A):

N<sub>1</sub> (Fan) 100 percent 13,034 r.p.m.

N<sub>2</sub> (Gas Gen.) 100 percent 32,700 r.p.m. (S/N 560-5002 Only)

N<sub>2</sub> (Gas Gen.) 101 percent 33,027 r.p.m. (S/N 560-5001, 560-5003 and On)

Max. permissible interturbine gas temperatures:

Takeoff $720^{\circ}$  C.Max. continuous $720^{\circ}$  C.Starting $720^{\circ}$  C.Transient (20 seconds) $760^{\circ}$  C.

Airspeed Limits V<sub>MO</sub> (Maximum operating)

Sea level to 8,000 ft. 261 KCAS (260 KIAS) 8,000 ft. to 26,515 ft. 306 KCAS (305 KIAS)

M<sub>MO</sub> Above 26,515 ft. 0.752 Mach (0.750 MIAS)

 $V_A$  (Sea level)

20,000 lb. 196 KCAS (195 KIAS) See AFM for variations with weight and altitude and optional configurations.

 $V_B$  (Speed for max. gust intensity) 211 KCAS (210 KIAS)

V<sub>FE</sub> (Flaps extended)

 $\begin{array}{lll} 35^{\circ} \, (Landing) & 175 \, KCAS \, (174 \, KIAS) \\ 15^{\circ} \, (Takeoff \, and \, approach) & 201 \, KCAS \, (200 \, KIAS) \\ V_{MCA} \, Air \, (Takeoff) \, [Min \, control \, speed] & 90 \, KCAS \, (90 \, KIAS) \\ V_{MCL} \, Air \, (Landing) \, [Min \, control \, speed] & 92 \, KCAS \, (92 \, KIAS) \\ V_{MCG} \, (Minimum \, control \, speed) \, Ground & 98 \, KCAS \, (98 \, KIAS) \\ V_{LO} \, (Landing \, gear \, operating \, extend) & 251 \, KCAS \, (250 \, KIAS) \\ \end{array}$ 

Tire Limit Maximum ground speed 165 knots

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C.G. Range (Landing Gear Extended)

Forward Limits: Linear variation from 324.060 in. aft of datum (21.24% MAC) at 20,000 lb. to 319.47 in.

aft of datum (15.66 % MAC) at 12,400 lb.

Aft Limits: 329.618 in. aft of datum (28.0 % MAC) from 20,000 lb. through 12,400 lb.

Empty Wt. C.G. Range None

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# VII - Model 560XL, (Excel), (Transport Category), Approved April 22, 1998 (Cont'd)

Datum Zero reference datum is 221.0 inches forward of the leveling screw just aft of the

cabin door on W.L. 127.25.

MAC 82.231 in. (Leading edge of MAC 306.593 in. aft of datum)

NOTE: This is reference MAC for basic wing without tip.

Leveling Means Outboard floor panel inside of door parallel to B.L. 13.00.

Maximum Weight Takeoff 20,000 lb.

 Landing
 18,700 lb.

 Zero fuel
 15,000 lb.

 Ramp
 20,200 lb.

Minimum Weight Inflight 12,400 lb.

Minimum Crew For all flights: 2 persons (pilot and co-pilot)

No. of Seats 9 to 14 (2 pilots, 7 to 12 passengers) (See Note 29)

Maximum Baggage Tailcone: 700 lb. at 431.0 in. aft of datum

Fuel Capacity (Gal.) Two wing tanks: Total 505.8 each; usable 503.0 each

ARM 328.8 in. aft of datum See NOTE 1 for data on unusable fuel.

Oil Capacity (Quarts) Two engine mounted tanks: Total 6.1 each; usable 2.4 each

ARM 433.9 in. aft of datum

Maximum Operating

Altitude

45,000 ft.

Control Surface Elevator (with stabilizer at + 1°) Up  $19^{\circ} + 1^{\circ}$ ,  $-0^{\circ}$  Down  $15^{\circ} \pm 1^{\circ}$  Movements Elevator trim tab (with stabilizer at + 1°) Up  $5^{\circ} \pm 1^{\circ}$  Down  $15^{\circ} \pm 1^{\circ}$ 

Rudder (perpendicular to hinge) Right  $22^{\circ} \pm 1^{\circ}$  Left  $22^{\circ} + 1^{\circ}$ ,  $-0^{\circ}$ 

Rudder trim tab Right  $11.5^{\circ} \pm 0.5^{\circ}$  Left  $11.5^{\circ} \pm 0.5^{\circ}$ 

(perpendicular to hinge with Rudder centered)

Aileron Up  $19^{\circ} \pm 1^{\circ}$  Down  $15^{\circ} \pm 1^{\circ}$ Aileron trim tab Up  $20^{\circ} \pm 2^{\circ}$  Down  $20^{\circ} \pm 2^{\circ}$ Wing flap  $0^{\circ}$ , and extend  $7^{\circ}$ ,  $15^{\circ}$ ,  $35^{\circ} \pm 1^{\circ}$ 

2-position Horizontal stabilizer

T/O & Landing  $-2^{\circ} + 0^{\circ}, -0.1^{\circ}$ Cruise  $+1^{\circ} + 0.1^{\circ}, -0^{\circ}$ 

See Airplane Maintenance Manual for rigging instructions.

## Certification Basis:

(1) Part 25 of the Federal Aviation Regulations, effective February 1, 1965, as amended by Amendments 25-1 through 25-82, with additions and exceptions as follows:

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# VII - Model 560XL, (Excel), (Transport Category), Approved April 22, 1998 (Cont'd)

Certification Basis (Cont'd):

(1), continued:

(a) Additions:

FAR §§ 25.305, 25.321, 25.331, 25.333, 25.335, 25.341, 25.343, 25.345, 25.349, 25.371, 25.373, 25.391, 25.427, and 25.1517 as amended by Amendment 25-86; and, FAR § 25.351 as amended by Amendment 25-91.

(b) Exceptions (as shown in table):

SECTION	TITLE	EFFECTIVE	EXCEPTIONS
NO.		AMENDMENT	[Not Part of Cert. Basis]
25.562	Emergency landing dynamic conditions.	25-82 Applicable	§§ 25.562(c)(5) and (c)(6)
25.571	Damage-tolerance and fatigue evaluation of structure.	25-82 Applicable	§ 25.571(e)(1)
25.631	Bird strike damage.	None, this section is not part of cert. basis.	§ 25.631 not applicable
25.671	Control Systems – General.		
	Applicable to the 2-position horizontal stabilizer.	25-82	None
	All other airplane control systems.		
		Original Issue Applicable (25-1 through 25-17)	§ 25.671 as amended by Amdts. 25-23 and later, not applicable
25.677	Trim Systems.	(	Tr ·····
	Applicable to the 2-position horizontal stabilizer.	25-82	None
	All other airplane trim systems, including the elevator trim.	Original Issue Applicable (25-1 through 25-17)	§ 25.677 as amended by Amdts. 25-23 and later, not applicable
25.1309	Equipment, systems, and installations.	(30 Tumougn 20 Tr)	причине
	Applicable to Electronic Flight Instrument systems (Honeywell Primus 1000 Cockpit Display), Flight Guidance, hydraulic, electrical, pressurization system, and 2-position horizontal stabilizer only.	25-82	None
	All other airplane systems.		
		Original Issue Applicable (25-1 through 25-17)	§ 25.1309 as amended by Amdts. 25-23 and later, not applicable.

- (2) FAR Part 36 effective December 1, 1969, as amended by Amendments 36-1 through 36-21.
- (3) FAR Part 34 effective September 10, 1990 as amended by Amendment 34-1.
- (4) Special Conditions as follows:

(a) 25-ANM-79, effects of High Intensity Radiated Fields (HIRF). The portions associated with System Lightning Protection do not apply; and

(b) 25-ANM-21, High Altitude Operation (45,000 feet). See note 26.

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# VII - Model 560XL, (Excel), (Transport Category), Approved April 22, 1998 (Cont'd)

Certification Basis (Cont'd):

- (5) Exemption: Exemption number 6706 granted. Model 560XL exempt from requirements of FAR § 25.677(b) for horizontal stabilizer position indicator.
- (6) Equivalent levels of safety as follows:
  - (a) FAR § 25.807(e), Emergency exits ditching (involves water barrier);
  - (b) FAR § 25.815, Passenger Cabin Aisle Width; (See Note 29)
  - (c) FAR § 25.813(e), Lavatory door installation between passenger compartments;
  - (d) FAR §§ 25.811(d)(1); 25.812(b)(1)(i), Emergency exit markings and locator signs;
  - (e) FAR § 25.841(b)(6), Takeoff and landing operations at high elevation airports;
  - (f) FAR § 25.1549(a) and (b), Digital only display of turbine engine N<sub>2</sub>;
  - (g) FAR §§ 1.1; 1.2; 25.101; 25.105; 25.109; 25.113; 25.115; 25.735; and 25.1587, Rejected takeoff distance and landing performance criteria (includes worn brake criteria); and
  - (h) FAR §§ 25.1305(a)(4), (a)(5), (a)(6), (c)(1) and (c)(3), and 25.1549(a) through (d), Digital only display of APU engine rotor speed, exhaust gas temperature and no indication of oil pressure or oil temperature.
- (7) FAR § 25.801 ditching not complied with.
- (8) Compliance with ice protection has been demonstrated in accordance with FAR § 25.1419.

Serial Nos. Eligible: 560-5001 and on

### VIII - Model 560, (Encore) (Transport Category), Approved April 26, 2000

The Model 560 Encore is defined by Cessna Airplane Assembly Drawing Number 6500560.

Engines Two Pratt & Whitney of Canada, Inc. PW535A turbofans

Fuel Jet A, Jet A-1, or JP-5. For required use of anti-icing additives and emergency use of aviation

gasoline, refer to the FAA Approved Airplane Flight Manual.

Engine Limits Static thrust, standard day, sea level:

Takeoff (5 min., Normal All Engines Operating) 3,400 lbs.
Takeoff (10 min., One Engine Inoperative) 3,400 lbs.
Maximum continuous 3,400 lbs.

Max. permissible engine rotor operating speeds:

N<sub>1</sub> (Fan) 100% 15,850 rpm N<sub>2</sub> (Gas Gen.) 100% 33,970 rpm

Max. permissible interturbine gas temperatures:

Takeoff  $700^{\circ}$  C Max. continuous  $700^{\circ}$  C Starting  $740^{\circ}$  C Transient (20 seconds)  $740^{\circ}$  C

 $\label{eq:continuous} \mbox{Airspeed Limits} \quad \mbox{$V_{MO}$ (Maximum operating)}$ 

Sea level to 8,000 ft. 8,000 ft. to 28,907 ft. M<sub>MO</sub> Above 28,907 ft. 260 KCAS (262 KIAS) 290 KCAS (292 KIAS) 0.75 Mach (0.755 MIAS) A22CE 46 Rev. 53

# VIII - Model 560, (Encore) (Transport Category), Approved April 26, 2000 (Cont'd)

Airspeed Limits (Cont'd)

V<sub>A</sub> (Sea level)

16,630 lb. 220 KCAS (221 KIAS)

See AFM for variations with weight and altitude

V<sub>FE</sub> (Flaps extended)

 35° (Landing)
 173 KCAS (173 KIAS)

 15° (Takeoff and approach)
 199 KCAS (200 KIAS)

 7° (Takeoff)
 199 KCAS (200 KIAS)

V<sub>MCA</sub> (Minimum control speed Air) 84 KCAS (86 KIAS)

V<sub>MCG</sub> (Minimum control speed Ground)

 15° (Takeoff)
 95 KCAS (92 KIAS)

 7° (Takeoff)
 99 KCAS (96 KIAS)

 $\begin{array}{lll} V_{LO} & \text{(Landing gear operating extend)} & 249 \text{ KCAS (250 KIAS)} \\ V_{LO} & \text{(Landing gear operating retract)} & 199 \text{ KCAS (200 KIAS)} \\ V_{LE} & \text{(Landing gear extended)} & 249 \text{ KCAS (250 KIAS)} \\ \end{array}$ 

V<sub>SB</sub> (Speed brakes extended) Any speed with or without flaps

Tire Limit Maximum ground speed 190 knots

C.G. Range (Landing Gear Extended)

Forward Limits: Linear variation from 299.29 in. aft of datum (21.89% MAC) at 16,830 lb. to 296.14 in.

aft of datum (18.0% MAC) at 12,400 lb.; 296.14 in. aft of datum (18.0% MAC) at

12,400 lb. or less.

Aft Limits: 304.23 in. aft of datum (28.0 % MAC) at 16,630 lb. or less.

Empty Wt. C.G. Range None

Datum 94.0 in. forward of the front face of the forward pressure bulkhead.

MAC 80.98 in. (L.E. of MAC at Sta. +281.56)

NOTE: This is reference MAC for basic wing without leading edge cuff and tip

Leveling Means Crew Seat Rails (Lateral level); Cabin Door Step Hinge Brackets (Longitudinal level)

Maximum Weight Takeoff 16,630 lb.

Landing 15,200 lb. Zero fuel 12,600 lb. Ramp 16,830 lb.

Minimum Crew For all flights: 2 persons (pilot and co-pilot)

No. of Seats 9 to 13 (2 pilots, 7 to 11 passengers)

Maximum Baggage

Nose Compartment 310 lb. (at Sta. + 74.0)

Aft Cabin 600 lb. (at Sta. +348.0)

 $300\ lb.$  (at Sta. +434.0) and 200 lb. (at Sta. +462.0)

Fuel Capacity (Gal.) Two wing tanks: Total 406.4 each; usable 403 each

Tailcone

ARM: +303.5 in.

See NOTE 1 for data on unusable fuel

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# VIII - Model 560, (Encore) (Transport Category), Approved April 26, 2000 (Cont'd)

Oil Capacity (Quarts) Two engine mounted tanks: Total 8.6 each; usable 0.6 each

ARM: +387.0 in.

Windshield Anti-Ice Capacity: 2.0 quarts

Elevetor

ARM: +91.5 in.

Fluid Approved Anti-Ice Fluids: TT-I-735 Isopropyl alcohol

Maximum Operating

Altitude 45,000 ft.

#### Control Surfaces Movements

Elevator	Up	18' +1', -1/2'	Down	13 ±1
Elevator trim tab	Up	$4\frac{1}{2}^{\circ} +0^{\circ}, -\frac{1}{2}^{\circ}$	Down	11° +½°, -0°
Rudder	Right	22° +1°, -0°	Left	22° +1°, -0°
(perpend	licular to h	inge)		
Rudder trim tab	Right	10° <u>+</u> 1°	Left	10° <u>+</u> 1°
(perpend	licular to h	inge)		
Aileron	Up	19° <u>+</u> 1°	Down	15° <u>+</u> 1°
Aileron trim tab	Up	20° <u>+</u> 1°	Down	20° <u>+</u> 1°
Wing flap	Down	$0^{\circ}$ to $35^{\circ} \pm 1^{\circ}$		
Speed brake	Upper	$0^{\circ}$ to $58^{\circ}$ +2°, -0°		

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See Airplane Maintenance Manual for rigging instructions

#### **Certification Basis:**

- (1) Part 25 of the Federal Aviation Regulations effective February 1, 1965, as amended by Amendments 25-1 through 25-17, and the following:
  - (a) Additions:

§ 25.1401 as amended by Amendments 25-1 through 25-27, and;

§§ 25.787, 25.789, 25.791, 25.853, 25.855, 25.857, and 25.1359 as amended by Amendments 25-1 through 25-32, and;

§ 25.1303(a)(2) as amended by Amendments 25-1 through 25-38, and;

 $\S 25.305$  as amended by Amendments 25-1 through 25-54, and;

§§ 25.119, 25.121, 25.125, 25.143, 25.145, 25.149, 25.201, 25.203, 25.251, 25.253, 25.337, 25.361, 25.363, 25.371, 25.471, 25.473, 25.479, 25.481, 25,483, 25.485, 25.489, 25.491, 25.493, 25.509, 25.611, 25.721, 25.723, 25.725, 25.727, 25.731, 25.733, 25.735, 25.863, 25.865, 25.867, 25.869, 25.901, 25.933, 25.934, 25.939, 25.943, 25.951, 25.952, 25.959, 25.961, 25.965, 25.977, 25.979, 25.994, 25.995, 25.997, 25.999, 25.1001, 25.1041, 25.1043, 25.1045, 25.1091, 25.1093, 25.1103, 25.1121, 25.1123, 25.1141, 25.1143, 25.1145, 25.1163, 25.1165, 25.1181, 25.1183, 25.1185, 25.1189, 25.1195, 25.1197, 25.1199; 25.1203, 25.1205(revoked), 25.1207, 25.1305, 25.1316, 25.1322, 25.1326, 25.1337, 25.1351, 25.1385(c), 25.1387, 25.1419, 25.1438, 25.1521, 25.1549, and 25.1551 as amended by Amendments 25-1 through 25-91, and;

(b) Additions for the Honeywell Primus 1000 Electronic Flight Instrument Systems only:

 $FAR ~\S ~25.1301, 25.1303(b), 25.1322 ~as ~amended ~by ~Amendments ~25-1 ~through ~25-38; ~\S ~25.1309, \\ 25.1321(a), (b), (d), ~and (e), 25.1331, 25.1333, ~and ~25.1335 ~as ~amended ~by ~Amendments ~25-1 ~through ~25-41. \\$ 

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# VIII - Model 560, (Encore) (Transport Category), Approved April 26, 2000 (Cont'd)

### **Certification Basis** (Cont'd):

- (1) (Cont'd):
  - (c) Addition limited ONLY to:
    - (i) Pressurization System; Digital Controller and Outflow System;
    - (ii) Anti-skid System; Individual Wheel Digital Anti-skid Controller;
    - (iii) Anti-ice System; Electronic Tail Boot Control and Monitoring and Outboard Wing Leading Edge Bleed Air Control and Fault Annunciation.
    - (iv) Integrated Warning, Caution, and Advisory Annunciation System limited to the Internal Control Logic and Display Functions Only.

FAR § 25.1309 as amended by Amendments 25-1 through 25-91.

- (2) FAR Part 36 effective December 1, 1969, Noise Standards, as amended by Amendments 36-1 through 36-22.
- (3) FAR Part 34 effective September 10, 1990, Fuel Venting and Exhaust Emission Requirements for Turbine Engine Powered Airplanes, as amended by Amendments 34-1 through 34-3.
- (4) Special Conditions as follows:
  - (a) 25-ANM-21, additional requirements for High Altitude Operation (45,000 feet).
  - (b) 25-ANM-79, additional requirements for High Intensity Radiated Fields (HIRF) only.
  - (c) 25-25-CE-4, additional requirements for Turbine engine powerplant installation [Paragraphs 3, Inflight restart capability; 6, Turbine engine powerplant installation; and 7, Engine ignition system only].
- (5) Equivalent levels of safety as follows:
  - (a) FAR § 25.815, Passenger Cabin Aisle Width;
  - (b) FAR § 25.773(b)(2), Use of clear vision area of windshield;
  - (c) FAR § 25.1549(a) and (b), N<sub>2</sub> Digital Indicator Markings;
  - (d) FAR § 25.813(e), Frangible door;
  - (e) FAR § 25.807(d), Emergency exits ditching.
- (6) FAR § 25.801 ditching not complied with.
- (7) Compliance with ice protection has been demonstrated in accordance with FAR § 25.1419.

Serial Nos. Eligible: 560-0539 through 560-5000

# Data Pertinent to All Models

Application for Type Certificate dated July 16, 1968. Type Certificate No. A22CE issued September 9, 1971.

Production Basis Production Certificate No. PC-4 effective June 1, 1985, or later issue. Production Certificate No.

PC-312 effective September 9, 1971, through May 31, 1985. Effective February 15, 1985, and on, Production Certificate No. PC-4 is applicable to all spares production. See NOTE 14 for latest

issue date of PC-4 and specific effectivity on airplane models and serial numbers.

Equipment The basic required equipment as prescribed in the applicable airworthiness regulations

(see Certification Basis) must be installed in the aircraft for certification.

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# Data Pertinent to All Models (Cont'd)

NOTE 1. Current weight and balance report including list of equipment included in certificated empty weight, and loading instructions when necessary must be provided for each aircraft at the time of original certification. The certified empty weight and corresponding center of gravity location must include:

Unusable fuel	96.0 lb. at +247.0 in.	(500, S/N 500-0001 through 500-0040)
	200.5 lb. at +247.0 in.	(500, S/N 500-0001 through 500-0040 incorporating
		SB500-28-10)
	58.0 lb. at +247.0 in.	(500, S/N 500-0041 through 500-0689)
	138.4 lb. at +247.0 in	(500, S/N 500-0041 through 500-0689 incorporating
		SB500-28-10)
	52.8 lb. at +298.4 in.	(550, S/N 550-0001 through 550-0800)
	47.2 lb. at +281.7 in.	(550, S/N 550-0801 and on)
	60.0 lb. at +285.5 in.	(S550, S/N S550-0001 through S550-0160)
	20.0 lb. at +288.0 in.	(552)
	20.0 lb. at +308.0 in.	(560 Citation V and Ultra, S/N 560-0001 through 560-
		0538)
	37.8 lb. at +333.5 in.	(560XL)
	35.6 lb. at + 289.1 in.	(560 Encore, S/N 560-0539 through 560-5000)
Full oil	34.3 lb. at +322.0 in.	(500 with JT15D-1 engine)
	33.1 lb. at +322.0 in.	(500 with JT15D-1A engine)
	34.7 lb. at +367.0 in.	(550, S/N 550-0001 through 550-0800)
	34.7 lb. at +367.0 in.	(S550)
	31.2 lb. at +367.0 in.	(552)
	31.3 lb. at +387.0 in.	(560 Citation V, S/N 560-0001 through 560-0259)
	32.2 lb. at +387.0 in.	(560 Ultra, S/N 560-0260 through 560-0538)
	19.3 lb. at +366.9 in.	(550 Bravo, 550-0801 and on)
	23.7 lb. at +433.9 in.	(560XL)
	34.1 lb. at +387.0 in.	(560 Encore, S/N 560-0539 through 560-5000)
Hydraulic fluid	27.5 lb. at +284.0 in.	(500)
	16.3 lb. at +341.8 in.	(550, S/N 550-0001 through 550-0733)
	31.5 lb. at +300.3 in.	(S550 and 552)
	31.5 lb. at +320.3 in.	(560 Citation V and Ultra, S/N 560-0001 through 560-
		0538)
	17.8 lb. at +342.7 in.	(550, S/N 550-0801 and on)
	34.2 lb. at +354.0 in.	(560XL)
	21.7 lb. at +284.0 in.	(560 Encore, S/N 560-0539 through 560-5000
•	•	
Anti-Ice fluid	15.2 lb. at +82.3 in.	(S550)
(Airframe)	65.5 lb. at +86.3 in.	(552)
(minume)	00.0 10. at 100.0 m.	(602)
Anti-Ice fluid	3.4 lb. at +91.4 in.	(500, 550, S550, 552, and 560 Citation V and Ultra S/N
(Windshield)	J.¬ 10. at ¬/1.¬ III.	560-0001 through 560-0538)
( ** masmera)	3.4 lb. at +91.5 in.	(560 Encore, S/N 560-0539 through 560-5000)
	J.4 10. at +91.J III.	(200 Eucore, 2/14 200-0224 milough 200-2000)

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### Data Pertinent to All Models (Cont'd)

NOTE 2. Airplanes must be operated according to the FAA Approved Airplane Flight Manual (AFM). Required placards and markings are listed Chapter Eleven (11) of Maintenance Manual. AFMs and Maintenance Manuals are as follows:

Model	AFM P/N	Maintenance Manual P/N	
	(Or later approved revision)	(Or later revision)	
500	500FM057	500MM030	
550	55FM-41	55MM23	
550 Bravo	55BFM-06	55BMM06	
S550	S55FM-43	S55MM08	
552	552FM08	552MMS01	
560 Citation V	56FM-11	56MM11	
560 Ultra	56FMA-08	56MM11	
560XL	56XLFM-03	56XMM06	
560 Encore	56FMB-01	56MM12	

- NOTE 3. See Maintenance Manual, Chapter 4, "Airworthiness Limitations" for inspections, mandatory retirement life information, and other requirements for continued airworthiness.
- NOTE 4. All Model 500, 550, 552, S550 and 560 replacement seats (crew and passenger), although they may comply with TSO C39, must also be demonstrated to comply with FAR 25.785. All Model 560XL replacement seats must comply with FAR § 25.562, Emergency landing dynamic conditions, as shown in the certification basis.
- NOTE 5. Model 500 S/N 500-0001 through 500-0070 are eligible for the Maximum Weights and C.G. Range applicable to S/N 500-0071 and up when modified in accordance with Cessna Service Bulletin SB32-1.

Model 500 S/N 500-0001 through 500-0302 are eligible for Maximum Weights and C.G. Range applicable to S/N 500-0303 and up when modified in accordance with the following Cessna Service Bulletins:

S/N 500-0001 through 500-0040, SB 30-1, SB32-1, SB32-23

S/N 500-0041 through 500-0070, SB32-1, SB32-23

S/N 500-0071 through 500-0302, SB32-23

Model S550 S/N S550-0001 through S550-0085 are eligible for the Maximum Weights and C.G. Range applicable to S/N S550-0086 and up when modified in accordance with Cessna Service Bulletin SBS550-11-1

- NOTE 6. Airplanes in compliance with ECR EC00002 and ECR EC07682, Model 500 & 550, respectively, comply with French Certification requirements of the DIRECTION GENERALE DE L'AVIATION CIVILE of France. Such aircraft are identified by a prefix letter "F" at the beginning of the manufacturer's serial number. Examples: F500-XXXX(500) or F550-XXXX(550).
- NOTE 7. Model 500 S/N 500-0001 through 500-0349 conforming to ECR 500-1048 or SB34-15 are eligible for 9,500 lb. zero fuel weight with  $V_{MO}$  reduced to 275 KCAS from 14,000 ft. to 28,000 ft. Aircraft conforming to ECR EC01164 or SB34-23 are eligible for 10,500 lb. zero fuel weight with  $V_{MO}$  reduced to 260 KCAS from 14,000 ft. to 30,500 ft.

Model 500 S/N 500-0350 and up conforming to ECR EC04139 or SB34-15 are eligible for 9,500 lb. zero fuel weight with  $V_{MO}$  reduced to 260 KCAS from 14,000 ft. to 30,500 ft.

Model 550 S/N 550-0001 through 550-0549 conforming to ECR EC04574 or SB550-34-4 are eligible for 11,000 lb. zero fuel weight with  $V_{MO}$  reduced to 260 KCAS from 14,000 ft. to 30,500 ft.

 $11,\!000$  lb. zero fuel weight provision is standard at S/N 550-0550 through 550-0800.

Model 560 S/N 560-0001 through 560-0259 conforming to ECR 26053 are eligible for 12,200 lb. zero fuel weight with  $V_{MO}$  reduced to 275 KCAS from 8,000 ft. to 31,400 ft.

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### Data Pertinent to All Models (Cont'd)

- NOTE 8. Model 500 S/N 500-0275 and up conforming to ECR EC02446 and aircraft S/N 500-0001 and up modified in accordance with Cessna Service Bulletin SB25-17 are eligible to carry a maximum of 9 people.
- NOTE 9. Model 500 S/N 500-0001 through 500-0349 may use Pratt & Whitney Aircraft of Canada, Ltd. JT15D-1A engines with Cessna Service Bulletin SB72-2 incorporated and operate to JT15D-1 limits (engines may be interchanged in any combination).
- NOTE 10. Model 500 S/N 500-0001 through 500-0213 are eligible for operation at 41,000 ft. when modified in accordance with Cessna Service Bulletin SB21-9.
- NOTE 11. Model 500 S/N 500-0001 through 500-0349 may use Pratt & Whitney of Canada, Ltd. JT15D-1A engines with Cessna Service Bulletin SB72-3 incorporated and operate to JT15D-1A limits.
- NOTE 12. Model 550 S/N 550-0021 through 550-0505 and S/N 550-0550 through 550-0800 conforming to ECR EC08691 are eligible to carry a maximum of 13 people.
- NOTE 13. Approved nose gear tires are limited to those listed in the Limitations Section of the FAA Approved Airplane Flight Manual.
- NOTE 14. Production Certificate No. PC-4 issued May 7, 1998. Applies to the following airplanes and serial numbers: Model 500 beginning at S/N 500-0687 through 500-0689; Model 550 beginning at S/N 550-0550 through 550-0800; Model S550 beginning at S/N S550-0034 through S550-0160; Model 552 beginning at S/N 552-0012 through 552-0015; Model 560 (Citation V and Citation Ultra) S/N 560-0001 through 560-0538; Model 550 (Bravo) S/N 550-0801 and on; and Model 560XL beginning at S/N 560-5001 and on.
- NOTE 15. The Model 552 is approved with a five-inch removable nose plug assembly installed between the radome and nose fuselage structure, as defined by Cessna ECR EC21789. No Flight Manual changes are required.
- NOTE 16. Model S550 airplanes S/N S550-0121 through S550-0160 are eligible for German configuration and meet the certification requirements of Luftfahrt-Bundesamt of the Federal Republic of Germany when modified in accordance with Cessna ECR EC20308 and CR00206.
- NOTE 17. The venting of flammable vapors away from operating tailcone equipment has been satisfactorily demonstrated by flight test demonstration of the differential between tailcone internal and external area pressures. This demonstration was accomplished only with certain equipment installed and operating. Equipment installations or other modifications to the tailcone which add additional ignition sources or possibly affect tailcone differential pressures must be coordinated with the Wichita Aircraft Certification Office.
- NOTE 18. For the Model 500, the first 349 airplanes are identified by serial number only, i.e., S/N 500-0001 through 500-0349. Above this number, airplanes had both a serial number and a unit number, which may not coincide. For those airplanes consult the Introduction Section of the Maintenance Manual for the unit/serial number relationship when complying with Airworthiness Directives and performing required maintenance.
- NOTE 19. For the Model 550, the unit number and the airplane serial number may not coincide until unit number 439 (S/N 550-0439). For prior airplanes, consult the Introduction Section of the Maintenance Manual for the unit/serial number relationship when complying with Airworthiness Directives and performing required maintenance.
- NOTE 20. Model S550 airplanes conforming to Cessna Drawing 6590002-2 and Model 560 airplanes conforming to

Cessna Drawing 6590561-1 or -2 (for public transport or private category operation, respectively) comply with the certification requirements of the DIRECTION GENERALE DE L'AVIATION CIVILE OF FRANCE. Airplanes so modified or so constructed retain their original unit/serial number identification.

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Data Pertinent to All Models (Cont'd)

NOTE 21. Model 550 S/N 550-0001 through 550-0505, and S/N 550-0550 through 550-0626 when modified in accordance with Cessna Service Bulletin SB550-32-14 and Model S550 S/N S550-0001 through S550-0160 when modified in accordance with Cessna Service Bulletin SBS550-32-08 are eligible to operate at the following  $V_{LO}$  and  $V_{LE}$ :

	Model 550 -		Model S550 –		
	SB550-32-14		SBS550-32-08		
	11,000	9,500			
	<u>lb. ZFW</u>	<u>lb. ZFW</u>	Gravel Kit	Std. Acft.	Gravel Kit
V <sub>LO</sub> (Landing gear operating extend)	248 KCAS	248 KCAS	198 KCAS	250 KCAS	200 KCAS
V <sub>LO</sub> (Landing gear operating retract)	198 KCAS	198 KCAS	198 KCAS	202 KCAS	200 KCAS
V <sub>LE</sub> (Landing gear extended)	260 KCAS	275 KCAS	198 KCAS	278 KCAS	202 KCAS

NOTE 22. Model 560 Citation V and Ultra (S/N 560-0001 through 560-0538) airplanes conforming to ECR 26053, 12,200 ZFW Option and conforming to ECR 26155 Gravel Kit, the following V<sub>LO</sub>'s and V<sub>LE</sub>'s apply:

	Model 560 (Citation V and Ultra)		
	12,200 lb. ZFW	Gravel Kit	
	ECR 26053, Rev. D	ECR 26155, Rev. C	
V <sub>LO</sub> (Landing gear operating extend)	249 KCAS	199 KCAS	
V <sub>LO</sub> (Landing gear operating retract)	199 KCAS	199 KCAS	
V <sub>LE</sub> (Landing gear extended)	275 KCAS	199 KCAS	

ECR 26053, 12,200 ZFW Option is applicable to S/N 560-0001 through 560-0259.

NOTE 23. Model 552, S/N 552-0001 through S/N 552-0011, S/N 552-0013, and S/N 552-0015 destroyed.

NOTE 24. Deleted.

NOTE 25. Model 550 (Bravo) increase the maximum operating altitude from 41,000 feet to 45,000 feet when modified in accordance with the following Cessna Service Bulletins:

S/N 550-0801 through 550-0808, Cessna Service Bulletin SB550-03-03;

S/N 550-0809 through 550-0820, and S/N 550-0822 through 550-0823, Cessna Service Bulletin SB550-34-64.

NOTE 26. Certain models have been approved for high altitude operations (altitudes above 41,000 feet), either by Special Conditions or compliance with certain Part 25 sections. Any modifications to the pressure vessel must be approved in accordance with the requirements as shown in the appropriate certification basis. This includes modifications which could result in a pressure vessel opening, either through crack-growth or antenna loss, greater than the specified areas as follows:

Model 550 (Bravo) S/N 550-0801 and on:	4.00 sq. in.
Model 560 (Citation V and Ultra) S/N 560-0001 through 560-0538:	4.00 sq. in.
Model 560XL (Excel):	3.98 sq. in.
Model 560 (Encore) S/N 560-0539 through 560-5000:	4.00 sq. in.

NOTE 27. Model 560XL. Left divider assembly (part no. 6679017-1) or equivalent must always be installed when the LH aft toilet is installed and approved for occupancy during takeoff and landing. The structural divider is an integral part of the seat restraint system.

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# Data Pertinent to All Models (Cont'd)

NOTE 28.

Models 500, 550 (S/N 550-0001 through 550-0505 and 550-0550 through 550-0800), S550, 552, and 560 (S/N 560-0001 through 560-0259 and 560-0260 through 560-0538). Special Condition number 25-25-CE-4 applies to the following: (1) Operation without normal electrical power; (2) Limit Maneuvering load factor, in lieu of § 25.337(b); (3) Turbulence criteria; (4) Vibration and buffeting, in lieu of § 25.251(c); (5) Engine exhaust system drains; (6) Engine bleed air system; (7) Engine inflight restart capability; (8) Engine thrust control; (9) Powerplant installation fault analysis; (10) Turbine engine powerplant installation, in lieu of § 25.903(d); (11) Engine ignition system; and (12) Powerplant shutoff means, in addition to § 25.1189.

NOTE 29.

Model 560XL width of aisle equivalent level of safety applies to passenger seating arrangements from 7 to 12 passengers, and allows a minimum aisle width of 15 inches when measured 25 inches and higher from the floor. Any further reduction in aisle width requires further FAA evaluation and is not included in this grant of equivalent level of safety.

NOTE 30.

Certain Models meet the initial airworthiness requirements for operation in Reduced Vertical Separation Minimum (RVSM) airspace.

Model 560 Ultra	S/N 560-0260 through 560-0525 that have accomplished Cessna Service Bulletin SB560-34-79, and S/N 560-0526 through 560-0538.
Model 550 Bravo	S/N 550-0801 through 550-0872 that have accomplished Cessna Service Bulletin SB550-34-70, and S/N 550-0873 and on.
Model 560XL	S/N 560-5001 and on.

Each operator must obtain RVSM operating approval directly from the FAA.

...END...